

A Football Player's Insider View: Inspiring the Success Story of the Turkey Amputee Football National Team

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Abstract

Turkey wins the European Amputee Football Federation (EAFF) championship after beating England 2-1 in the final held at Istanbul. The aim of this research was to explore, conceptualize and explain the success story of Turkey Amputee Football National Team. Thus, the goal was to present a map of success. One football player was interviewed using open-ended questions. The data were analyzed using thematic analysis. Analysis resulted in a synthesis of the various ways Turkey National Amputee Football Team experienced success: (a) Determination and Team Spirit, (b) Self-sacrifice, (c) Challenging to Limitations, Restrictions and Barriers, and (d) Dependent Images and Expectations. The results are consistent with the building blocks (Positive Emotion, Engagement, Relationships, Meaning, and Accomplishment) of flourishing and well-being suggested by PERMA Theory.

Key Words: Amputee football, success story, thematic analysis, PERMA theory

INTRODUCTION

Achievement is a concept repeating in human movement as sports, exercise or recreation. Since the first days of life, human beings have tried to feel effective in their interactions arising with the nature and due to the fact that this need has been prevented throughout life, 'well-being' or 'flourishing' of human beings have been endangered (1-3). Despite of distinct universality of achievement motivation, there are obvious differences between pursuing achievement by human beings (4). Achievement motivation theories tries to explain the processes starting achievement behavior, directing and maintaining it. Achievement motivations are relatively steady individual differences affecting motivations of human beings while seeking achievement. This introduction defines achievement motives, presents a general overview regarding they are developed, examines implicit and clear measures

of motives and summarizes documented results of achievement motives (1-5).

Achievement reasons of human beings are explained based on either moving towards achievement-based inducements while seeking achievement or moving away from it. Motive to approach to achievement (sometimes it is also named achievement hope) defines individual differences of human beings in tendency to experiencing expectation pride while pursuing achievement (1,2). Motive to prevent failure explains individual differences tendency to experience embarrassment be expected while pursuing achievement by human beings. Over time, these motives have been named as achievement and failure fear. Pride and embarrassment anticipated regarding motives, are effective in activating and directing achievement behavior (1,2,4). For instance, pride promotes persistency for seeking aim and increasing participation, long-term achievement,

stimulates interpersonal expression, participates flexible social behaviors and makes contribution to improving social capital in time. On the other hand, embarrassment motives stand back Based on how human beings regulate their embarrassment, it can promote calm down or being aggressive (4). In terms of motivating achievement, it undermines persistency and rise difficulties to reach long-term aims. In their achievement motivation theory (3), assert that motivation of a person is affected by a tendency away from achievement tendency and failure. Each of these tendencies, is represented as value of perception (or being failure) possibility and achievement reward (or failure penalty) and production of motives of a person. For this reason, reasons are suggested to correct basic expectation-values estimations and to detail interpersonal behavior variety. Over time, independence of approach and avoidance motive has arisen and the idea that attitude and avoidance tendencies produce only one result motivation tendency, has been deserted. In contemporary researches, achievement motives based on approach and avoidance regarding motivation are typically taken into consideration as independent determiners and their direct effects on the results regarding motivation, expectations and interaction with values attract more attention (3,5).

In final match of 2017 EAFF European Championship hosted by Turkey, Turkish national team became champion in EAFF Europe Amputee Football Championship by 2-1 winning against England national team. Story of experiences forming the source of this achievement, meaning social reality or phenomenon that is wanted to examine, indicates the importance of the nature of the subject that is wanted to research. The research aims to explore, conceptualize and explain success story of Amputee Football National Team. Thus, it is aimed to present a success map to readers. In the research, it has been tried to bring a rich "subjective" approach deep for the question "what are the reasons of success of Turkey Amputee Football National Team?"

The concept of subjectivity is a difficult concept, it is connected with human requests, needs, desires and also dynamic interpretations of events and memories accumulated in human memory. Subjectivity researches are holistic reviews of human experiences ensuring opportunity to understand inner opinions about experiences and to understand contents of these inner opinions expected to arise.

Researching subjectivity can make researchers get close to very special experiences in life stories of others. In this context, experiences those are embedded in life stories; can be constructed perceptibly via process, chronology, reasoning and imagination (6). In scientific researches those have close relation with subjectivity, 'reflexivity' concept comes into prominence as an approach (7). Reflexivity that is defined in many ways, can be defined as a process to bring an approach regarding how behaviors of individuals about the subject of the research will be formed by other individuals and social world.

Amputation is defined as not having an organ or a part of body, it is generally lower or upper extremity or both. Amputation of an organ, can cause some problems such as compensative movements, changing the center of gravity, walking, decreasing running or ability to run, higher energy consumption, high heart rate and low oxygen consumption (8-11). However, it does not mean that challenging is impossible, since being disturbed is a part of learning and experience challenge promotes growing.

Amputee football is a type of traditional football where sportsmen are divided into classes: A2 / A4 (lower extremity amputee) and A 6 / A 8 (upper extremity amputee). A2 / A4 and A6 / A8 classes where sportsmen play on the ground, can play only as goalkeepers. A goalkeeper has two legs, but one of his upper organs is amputee. Thus, goalkeeper is not allowed to go out of post area, since he has normal mechanics for movement. Outer field players (A2 / A4 classes), use crutches for movement ability ensuring functional movement ability with upper body weight pass (9,12). For amputee players, these crutches are adjustable and hold on both sides (13). This sports can be played on natural or synthetic turf in minimum 60 x 30 m sizes and maximum 70 x 55 m. A team consists of seven players and one goalkeeper. A match is divided into two intervals in 25 minutes and there is a rest break taking 10 minutes in between (13). In a tactical function, a player, by being positioned on the pitch to realize a challenging action and to protect himself, is exposed to a peer of body, mind and spirit connection (10,14,15).

The factors (ontology and epistemology) those are effective in success of Amputee Football Turkish National Team, indicate the scope of this research. To generalize the research to wider masses, it is

required to examine the phenomenon taken into consideration, with different approaches (quantitative or quantitative + qualitative).

METHOD

Methodological approach

Qualitative research is based on a textual analysis to understand social facts based on human experiences (16). The purpose of the research is to find mutual subjects of the stories those are effective in success of Turkey Amputee Football National Team. In order to do it, qualitative interview technic that was not structured as 'data collection technic', was adopted (17). Interview questions were not determined before, however, they are formulated in situ based on answers of participant (18). For this reason, epistemological effects of the research were based on natural research tradition (19–21). Moreover, Carter and Little theorize that just as epistemology justifies methodology, methodology justifies the methods of use. Grounded in our epistemological intentions, we adopted a qualitative descriptive research design, a methodology that originates from a participant's "narrative, life history, testimonio" (22). Due to epistemological approach, 'objective fact' assertion was not climed; rather (23,24), Epistemological approach complies with a flexibility where both basic and constructive paradigm are valid (25,26). Besides, Braun and Clarke divide thematic analyses into two as inductive and deductive or theoretically. Due to the fact that a code frame that is existed before based on theory, is not used and data is processed as raw data given in data analysis section, Inductive Thematic Analysis was accepted. Creating themes presented in the results, is based on to theorize experiences of goalkeeper after Turkey won against England in 2017 EAFF European Championship.

Participant

In order to explore success story of Amputee Turkish National Team (sometimes spectacular, sometimes ordinary life fact) who became champion in 2017 EAFF European Championship hosted by Turkey, one of the players of the team was included into the research after he declared his voluntary participation. Based on the purpose of the research, using an epistemological approach in a naturalist inquiry, was suitable and related with the subject (20,21). It became possible to obtain rich definitions of phenomenon after deep interview and it was accepted significant after data set is reviewed (19,26–29). It is not asserted that data is saturated. If more

participants were involved into the research, it would be possible to find new themes. For this reason, it is accepted that more researches are need certainly. Even though sample size is small, sample size in quantitative research is not prioritized, since relevance level validates significance of data (30). Data reliability is based on high quality in interviews. Characteristics are referred such as high quality sound, printing word by word, change in data in terms of variety in a condition and samples (19,20). Besides, by using thematic analysis by Braun and Clarke, data has been analyzed deeply. It tries to find experiences in participant narratives, not for quantification of thematic analysis data (25). On this basis, participant discourses were represented with narrations from data, this is also an important matter to increase reliability in qualitative studies (20).

Data collection

This research was supported by Inonu University Scientific Research Projects Unit with project number TSA-2017-813. Before the research, an application was sent to Inonu University Ethic Review Council and this council convinced that there was no ethic obstacle for performing this research [2018/4-6]. The participant was informed about Helsinki Declaration about the study and voluntary aspects in written and verbal formats and also that he has right of withdrawal by not having no result and effect in his live in future. By collecting data, the participant gave informed consent. While submitting findings, personal information of the participant was not shared with any persons to ensure security and nicknames were used. Interview was made by asking open ended questions. An author of the research made interview with a participant. There is no relation between the interviewer and interviewee. In order to establish a comfortable ambient, the meeting began with a short conversation. Even though it is not a standard (18), interviewer started with a triggering question 'Could you please tell success story of Turkish National Team that became champion in EAFF European Championship?' Afterward, in order to encourage a participant to discourse specific subjects or ideas, chasing questions were asked based on his answers (30). For example, 'Could you please provide more information about that?' or 'How was that?'

Data analysis

A six-step thematic analysis that was clarified by Braun and Clarke was used (26). The purpose of thematic analysis, was to find patterns related with data and the analysis was made as follows: Phase one (being familiar with data): Decrypted data is read repeatedly and first opinions are noted. Phase two (producing beginning codes): Throughout the whole data set, interesting characteristics of data is coded systematically and collected below each code related with data. Phase three (searching theme): All data and codes were gathered below themes possibly related with potential themes. Phase four (reviewing themes): It was ensured to control compliance of coded data content of themes (1. Level) and all data sets (2. Level) and (28,29) to prepare thematic 'map' of the analysis. Phase five (defining and naming themes): To refine details of each theme, analysis was proceeded and clear description and naming of all themes and story that was told, were made. Phase six (preparing report): In this section which is the last opportunity for the analysis, direct citations with concrete, striking and persuasive sample, were selected. Coded data particles were analyzed for the last time. Analysis results were associated with the research questions and the body of literature and the results were reported with an academic language.

FINDINGS

The findings present success story of Turkish National Team that became champion in 2017 EAFF European Championship in 2017 hosted by Turkey. Table 1 demonstrates profiles of football players in Turkey Amputee Football National Team. As a result of the analyses, four themes were revealed for success reasons of Amputee Football National Team: (a) Determination and Team Spirit, (b) Self-sacrifice, (c) Challenging to Limitations, Restrictions Barriers, and (d) Dependent Images and Expectations.

Determination and team spirit

In the interviews, it was understood that determination of players is helpful to define their aims and to reach achievement in order to see those obtained aims. On the other hand, discourses stressing importance of relations and social connections, emphasize requirement of understanding in-team friendship and team spirit for consistency in achievement. "Really, no achievement incidentally happens. When we first started the camp, there were around 27-28 persons and 5 goalkeepers. But the numbers started to decrease over time during camps. Trainings passed

in a competitive and friendly ambient. Our training system was such: We did training in 37-38-degree temperatures. We woke up at 5 am. Bu we knew that when we become a single heart, when we learn to move together as a team, we will be achievementful. We made all our works in that way and we made all our discourses in that way. Sometimes, the things we made on the pitch, were not enough and we did indoor works and chats. We prepared each other mentally. Maybe, we could not receive much psychological support in that process and we had many deficits in professional sense. We tried to remove those deficits with our friendship. As a result, we were 18 persons and, 13 players and 5 persons as technical team, but we were a whole."

Self-sacrifice

In discourses mentioning that sportsmen are self-sacrificing persons naturally, even though most of sports steps serve themselves, it is believed that achievement cannot be reached without making sacrifice from social life or actual physical well-being. According to research findings, sportsmen who understand this, generally have potential to create the best team.

"If I need to say the simplest thing, we could not see our families. In fact, no one there saw their families. For instance, our coach did not see his children. But, the most interesting thing is that we had friends who came to camp at the second day after he had a child. There were friends who had child and came to camp. I know my teammates remained away from home in that process, their children, even a friend who recently married joined camp a day after his marriage. The biggest advantages of ours was to be one. In that sense, the most important thing is family but we left our families at the second row for our country."

Challenging to limitations, restrictions and barriers

In discourses, it is noted that big bodily, mentally and spiritually challenges are required in order to commit achievement by overcoming various limitations, constraints and obstacles. Besides, it is understood from discourses that challenges test skills and abilities of football players and support them for a flowing experience.

"We could easily get through first matches, anyway we were at the top of the list but we draw a very disastrous lot. When we matched with Russia in quarter final, it was highly interesting and

tragicomic thing since two seeding teams matched. We had a meeting at that day. I said this very few places. We said, no matter what, whoever we match, we will beat any team and we will make our country champion in this tournament. There was no other way for us, the matter was sportsmen for us at that day. We had a meeting in a room, we were angry since it was supposed to happen. In my opinion, there were wrong things happening. But, regardless these wrong things, no matter what, we became one at that day, we caused to groan at that day with our voices in National Team facilities in Riva at that day. I think everyone should strive based on his skills. Train yourself based on your skill and take your place on the stage. Nothing can stop you. Just want it. My dream was to play in front of crowd, I reached that aim at the age of 39. What is your lack comparing to me? I just say, come and take your place in life.”

Dependent images and expectations

Research findings demonstrate that being in an expectation by dreaming and forming positive thoughts for the future, has an important effect on achievement of football players.

“If it is required to be realistic, we believed that our lives will change at least a little bit after being champion. And this was a very big effect on reaching achievement for us. We were fabulously impressed to have favour of people filling the stadium, people watching us on television and especially top government officials. We want to remove the obstacles in front of sports. As a sportsman, we will have work about that and we will make new achievement initiatives.”

Table 1. Profile of football players

Football player	Stories about disability element
Safter	He pressed on mine while performing national service and lost his left leg below his knee.
Merih	He has not one leg congenitally.
Hulusi	He had a car crush when he was playing football on a street on 23 April 1993 and lost lower part of his right leg.
Özcan	He lost his right foot as a result of a traffic accident.
Yalçın	He was born with a shorter one leg.
Cemil	His right leg is congenitally disabled.
Kerim	He has not one leg congenitally.
Niyazi	He lost his left leg in a motorbike accident.
Nazif	He lost his left arm as a result of an electric shock when he was a child.
Nusret	One of his arms is shorter congenitally.
Şerif	While watching destruction a construction with his friends in neighborhood with his friends, earth digger fell on him.
Alihan	He suffered a seizure when he was a baby and his left leg have not grown.
Şamil	His foot was seized by chaff-cutter on field when he was a boy.

INTERPRETATIONS AND DRAWING

CONCLUSIONS

The research aims to explore, conceptualize and explain success story of Amputee Football Turkish National Team. The analyses were resulted with very wide synthesis of success experiences of Amputee Football Turkish National Team: (a) Determination and Team Spirit, (b) Self-sacrifice, (c) Challenging to Limitations, Restrictions and Barriers, and (d) Dependent Images and Expectations.

What is human flourishing and what enables it? PERMA Theory in positive psychology that was asserted by Dr. Martin Seligman in 2011, has been an attempt to answer these basic questions. According to that theory, there are five building blocks ensuring development and well-being: Positive

Emotions, Engagement, Relationships, Meaning and Achievement (31). The research results demonstrate consistency with these building blocks asserted by PERMA Theory.

Positive Emotion is hedonist (32) and increases positive emotion related with the past within the limits (for instance, gratitude and forgiveness) positive emotion about today (for instance, physical pleasures and awareness) and positive emotion related with the future (for instance, hope, positive expectation, imagining or optimism) (33–35). The analyses those are made on voice recording interviews, demonstrate that having an expectation by imagining and creating positive thoughts for the future, had great effect on success of Turkey Amputee Football National Team. “If it is required to be realistic, we believed that our lives will change at least a little bit after being champion. And this was a very big effect on reaching success for us. We

were fabulously impressed to have favour of people filling the stadium, people watching us on television and especially top government officials." According to research results, it can be mentioned that positive emotion about the future, affect success.

Engagement is an experience where a person demonstrates his/her skills and strong sides or where a person focuses all attention for a challenging task. In engagement, an experience named 'flow' is created (36) and when skills of one are enough for a challenging activity, progress for chasing a clear aim and for an specific goal, is experienced with a feedback almost immediately (37-39).

Turkish Amputee Football National Team believes that in order to commit success by overcoming various limitations, constraints and barriers, a big bodily, mentally and spiritually challenges are required. As a result of this challenge, it is understood that the team is passed to flow status. "We could easily get through first matches, anyway we were at the top of the list but we draw a very disastrous lot. When we matched with Russia in quarter final, it was highly interesting and tragicomic thing since two seeding teams matched. We had a meeting at that day. I said this very few places. We said, no matter what, whoever we match, we will beat any team and we will make our country champion in this tournament."

Relationships are very important for meaningful lives. An individual makes progress, upon relations promoting love, interaction and a strong emotional and physical interaction with other individuals (31). Positive relations with family, sibling, peer, spouse or friends, is basic component of a general well-being. Strong relations also provides support in difficult times required durability (40). Discourses stressing importance of relations and social connections, emphasize requirement of understanding in-team friendship and team spirit for consistency in success. "Really, no success incidentally happens. When we first started the camp, there were around 27-28 persons and 5 goalkeepers. But, the numbers started to decrease over time during camps. Trainings passed in a competitive and friendly ambient. Our training system was such: We did training in 37-38-degree temperatures. We woke up at 5 am. Bu we knew that when we become a single heart, when we learn to move together as a team, we will be successful."

Meaning can be derived from being belonged to a bigger thing than self and devotedly serve for it and well-being can be experienced in such case (31,40,41). Research results demonstrate that even though sports universe serves itself, success cannot be achieved without making sacrifice from social life and actual physical well-being. "If I need to say the simplest thing, we could not see our families. In fact, no one there saw their families. For instance, our coach did not see his children. But, the most interesting thing is that we had friends who came to camp at the second day after he had a child. There were friends who had child and came to camp. I know my teammates remained away from home in that process, their children, even a friend who recently married joined camp a day after his marriage. The biggest advantages of ours was to be one. In that sense, the most important thing is family but we left our families at the second row for our country. As a result, sacrifices demonstrated with meaning and aim feeling, can positively affect success in sports.

Success, creates focus of well-being and based on this building blocks, even if human beings make out that their experiences will not be resulted with positive emotions, meaning or relations, they go after success, competence, acquisition and mastership (31). The most essential results of success motives, consist of success aims. Human beings those have strong need for a success, are tendency to adopt suitable success aims such as mastership approach (focused on learning and development) and performance approach (focused on making better performance than others) (2-5). In interviews, it has been seen that determination of Turkey Amputee Football National Team is effective on defining aims and achieving success with those determined aims.

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REFERENCES

1. Conroy DE, Elliot AJ, Thrash TM. Achievement motivation. In: Leary MR, Hoyle RH, editors. Handbook of individual differences in social behavior. New York: Guilford Press; 2009. 382–99.
2. Conroy DE, Hyde AL. Measurement of achievement motivation processes. In: Tenenbaum G, Eklund RC, Kamata A, editors. Handbook of measurement in sport & exercise psychology. 2012. 330–7.
3. McClelland DC, Koestner R, Weinberger J. How do self-attributed and implicit motives differ? Psychol Rev. 1989;96:690–702.
4. Elliot AJ, Conroy DE, Barron KE, Murayama K. Achievement motives and goals: a developmental analysis. In: Lerner R, Lamb M, Freund A, editors. Handbook of lifespan development, vol 2: Social and emotional development. NY: Wiley; 2010. p. 474510.
5. McClelland DC, Atkinson JW, Clark RA, Lowell EL. The achievement motive. New York: Appleton Century Crofts; 1953.
6. Ketelle D, Ketelle L. Behind the t(rope): one boxer's story. Forum Qual Res. 2015;16(3):15.
7. Gilbert A, Slied Y. Relexivity in the practice of social action: from self-to inter-relational reflexivity. Psychol Soc South Africa. 2016;39(4):468–79.
8. Armstrong DG, Lavery LA, Boulton AJ. Negative pressure wound therapy via vacuum-assisted closure following partial foot amputation: What is the role of wound chronicity? Int Wound J. 2007;4(1):79–86.
9. Krause D, Wünnemann M, Erlmann A, Hölzchen T, Mull M, Olivier N. Biodynamic feedback training to assure learning partial load bearing on forearm crutches. Arch Phys Med Rehabil. 2007;88:901–6.
10. Mohanty RK, Lenka P, Equebal A, Kumar R. Comparison of energy cost in transtibial amputees using "prosthesis" and "crutches without prosthesis" for walking activities. Ann Phys Rehabil Med. 2012;55:252–62.
11. Velzen Van JM, Bennekom Van CAM, Polomski W, Sloomman JR, Woude Van Der LH V., Houdijk H. Physical capacity and walking ability after lower limb amputation: a systematic review. Clin Rehabil. 2006;20:999–1016.
12. Frère J. The history of "modern" amputee football in C.O.E.D.A. Terrorism. In: Amputee Sports for Victims of Terrorism. Ankara: IOS Press; 2007. 5–13.
13. Yazıcıoğlu K. Amputee sports for victims of terrorism. In: The Rules of Amputee Football in C o E D A Terrorism. Ankara: IOS Press; 2007. 94–9.
14. Bloomfield J, Polman R, O'Donoghue P. Physical demands of different positions in FA Premier League soccer. J Sport Sci Med. 2007;6:63–70.
15. Reilly T. Training Specificity for Soccer. Int J Appl Sport Sci. 2005;17(2):17–25.
16. Schwandt TA. Dictionary of qualitative inquiry. Thousand Oaks, CA: Sage; 2001.
17. Harding S. Introduction: Is there a feminist method? In: Harding S, editor. Feminism and methodology: Social science issues. Bloomington: Indiana University Press; 1987. 1–14.
18. Patel R, Davidson B. Forskningsmetodikens grunder: Att planera, genomföra och rapportera en undersökning. Lund: Studentlitteratur; 2003.
19. Lincoln YS, Guba EG. Naturalistic inquiry. Beverly Hills, CA: Sage; 1985.
20. Patton MQ. Qualitative research & evaluation methods. 1st ed. Qualitative Inquiry. USA: Sage; 2002.
21. Sandelowski M. Whatever happened to qualitative description? Res Nurs Health. 2000;23:334–40.
22. Carter SM, Little M. Justifying knowledge, justifying method, taking action: epistemologies, methodologies, and methods in qualitative research. Qual Health Res. 2007;17(10):1316–28.
23. Denzin NK, Lincoln YS, editors. Strategies of Qualitative Inquiry. 4th ed. Thousand Oaks, CA: Sage; 2013.
24. Moore C. Spiritual experiences and environmentalism of recreational users in the marine environment: New Zealand surfers and scuba divers. Lincoln University; 2011.
25. Boyatzis RE. Transforming qualitative information: Thematic analysis and code development. Thousand Oaks, CA: Sage; 1998.
26. Braun V, Clarke V. Using thematic analysis in psychology. Qual Res Psychol [Internet]. 2006;3(2):77–101. Available from: <http://eprints.uwe.ac.uk/11735>
27. gençlik kampı tanım [Internet]. [cited 2016 Dec 15]. Available from: <http://gençlikkamplari.gsb.gov.tr/Modul/GençlikKamplari.aspx>
28. Miles MB, Huberman AM, Saldaña J. Qualitative data analysis: A methods sourcebook. 3th Editio. London: Sage; 2014. 341.
29. Saldaña J. The coding manual for qualitative researchers. London: Sage; 2009. 240.
30. Seidman I. Interviewing as qualitative research: A guide for researchers in education and the social sciences. 3th Editio. New York: Teacher College Press; 2006. 1–162.
31. Seligman MEP. PERMA and the building blocks of well-being. J Posit Psychol [Internet]. 2018;13(4):333–5. Available from: <https://doi.org/10.1080/17439760.2018.1437466>
32. Deci EL, Ryan RM. Self-determination theory: a macrotheory of human motivation, development, and health. Can Psychol. 2008;49(3):182–5.
33. Diener E, Lucas RE. Personality and subjective well-being. In: Kahneman D, Diener E, Schwarz N, editors. Well-being: The foundations of hedonic psychology. New York: Russell Sage Foundation; 1999. p. 213–29.
34. Negahban A. Factors affecting individual's intention to purchase Smartphones from technology adoption and technology dependence perspectives. In: 18th Americas Conference on Information Systems 2012, AMCIS 2012. 2012.
35. Ryan RM, Deci EL. On happiness and human potentials: a review of research on hedonic and eudaimonic well-being. Annu Rev Psychol. 2001;52(1):141–66.
36. Csikszentmihalyi M. Flow: the psychology of optimal experience. NY: Harper and Row; 1990.
37. Csikszentmihalyi M. Beyond Boredom and Anxiety: Experiencing Flow in Work and Play. San Francisco: Jossey Bass; 1975.
38. Csikszentmihalyi M. Finding flow: the psychology of engagement with everyday life. NY: Harper Collins; 1997.
39. Nakamura J, Csikszentmihalyi M. The concept of flow. In: Snyder CR, Lopez J, editors. Handbook of positive psychology. NY: Oxford University Press; 2009. p. 89–105.
40. Seligman MEP, Csikszentmihalyi M. Positive Psychology: an introduction. Am Psychol. 2000;55(1):5–14.
41. Seligman MEP, Steen T, Park N, Peterson C. Positive psychology progress: Empirical validation of interventions. Am Psychol. 2005;60(5):410–21.